

Notice of Allowability

Application No.

10/734,213

Examiner

Kiley Stoner

Applicant(s)

BACON ET AL.

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/17/07.
2. ☒ The allowed claim(s) is/are 1-6, 8, 11-12 and 15-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Kiley Stoner
12/19/07

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claim 18, line 3 "an" has been replaced with --a--.

Allowable Subject Matter

Claims 1-6, 8, 11-12 and 15-24 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach or suggest either alone or in combination a method for providing a gas turbine compressor impeller as recited by claim 1, particularly, forging IMI 834 titanium to provide an impeller blank having a back face and an axis of rotation; forging a stump portion on the impeller blank, concentric with the axis of rotation, the stump portion extending from the back face; and assembling the impeller blank to the stub shaft in an axially end-to-end relationship by friction welding the stub shaft to the stump portion, concentric with the stump portion; wherein the step of forging the stump portion includes ensuring no extrusion of the stump portion occurs during said forging of the stump portion.

The prior art of record does not teach or suggest either alone or in combination a method for making a compressor rotor for a gas turbine engine as recited by claim 8, particularly forging a compressor blank from IMI 834 titanium alloy, the blank having an axis of rotation and a stump portion, the stump portion co-axially aligned with the axis of rotation, the stump portion having a height not greater than a diameter of the stump portion to thereby minimize extrusion of the stump portion during said forging; axially assembling the component to the blank in an end-to-end relationship by friction welding the component to the stump portion of the blank, concentric with the axis of rotation, to provide a welded assembly; wherein the step of forging includes forging a substantially extrusion-free stump portion on the blank coaxially with the axis of rotation.

The prior art of record does not teach or suggest either alone or in combination a method for providing a gas turbine compressor as recited by claim 18, particularly, forging IMI 834 titanium billet to provide a compressor blank having a back face, the billet having a pre-forging effective diameter; forging a stump portion on the blank, the stump portion extending from the back face, the stump portion having a diameter substantially equal to said effective diameter to thereby minimize extrusion of said stump portion during forging thereof; and friction welding the stub shaft to the stump portion to provide a welded assembly.

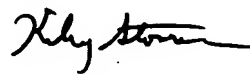
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiley Stoner whose telephone number is 571-272-1183. The examiner can normally be reached Monday-Thursday (9:30 a.m. to 8:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on 571-272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 12/19/07
Kiley Stoner

Primary Examiner A.U. 1793